

Cont

5 lining the first trench with dielectric material;
6 substantially filling the first trench with conductive material to form a gate
7 electrode of the field effect transistor;
8 forming a body region having a second conductivity type in the substrate;
9 after substantially filling the first trench with conductive material, forming
10 a source region having the first conductivity type inside the body region and adjacent to
11 the first trench;
12 forming a second trench adjacent to said source region, the second trench
13 defined by sidewalls extending into the body region and a bottom, which terminates
14 below the source region and in contact with the body region; and
15 filling the second trench with high conductivity material for making
16 contact to the body region.

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1 13. (Twice Amended) A process for manufacturing a trench field
2 effect transistor comprising the steps of:
3 etching a first trench in a substrate having a first conductivity type;
4 lining the first trench with a layer of dielectric material;
5 substantially filling the first trench with polysilicon;
6 implanting impurities of a second conductivity type into the substrate to
7 form a body region having the second conductivity type over the substrate;
8 after substantially filling the first trench with polysilicon, implanting
9 impurities of the first conductivity type inside the body region to form a source region
10 adjacent to the first trench;
11 etching a second trench through the source region and into the body
12 region, the second trench defined by sidewalls and a bottom, which terminates in contact
13 with the body region; and
14 filling the second trench with metal making contact with both the source
15 region and the body region.

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Application No.: 09/405,210
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Please add claims 18-21 as follows:

- 1 18. (New) The method of claim 1, wherein the first trench is
2 substantially completely filled with conductive material.
- 1 19. (New) The method of claim 1, wherein after filling the first trench
2 with conductive material, the conductive material does not extend over a substantial
3 portion of the substrate surface peripheral to the first trench.
- 1 20. (New) The method of claim 13, wherein the first trench is
2 substantially completely filled with polysilicon.
- 1 21. (New) The method of claim 13, wherein after filling the first trench
2 with polysilicon, the polysilicon does not extend over a substantial portion of the
3 substrate surface peripheral to the first trench.

REMARKS

Upon entry of this amendment, which amends claims 1 and 13, and adds claims 18-21, claims 1-3, 6-8, and 12-15 remain pending, and claims 18-21 are newly presented for examination. Claims 1-3, 6-8, and 12-15 were previously rejected under 35 U.S.C. §102(e) as being anticipated by Takahashi et al., U.S. Patent No. 5,366,914.

Reconsideration in view of the foregoing amendments and following remarks is respectfully requested.

Attached hereto is a "Version with Markings to Show Changes Made," indicating the changes that were made in the claims.

Rejection of Claims 1-3, 6-8, and 12-15 under 35 U.S.C. §102(e)

Claims 1-3, 6-8, and 12-15 were rejected under 35 U.S.C. §102(e) as being anticipated by Takahashi et al., U.S. Patent No. 5,366,914. Applicants respectfully traverse.